

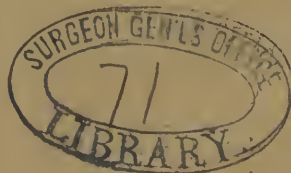
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THE DOMAIN
OF
MEDICAL POLICE.

(ABSTRACT OF A PAPER READ BEFORE THE NEW YORK
SANITARY ASSOCIATION, FEB. 6TH, 1862.)

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BY LOUIS ELSBERG, M.A., M.D.

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[NOTE.—The following sketch accomplished, it is believed, some little good by presenting at one view the extensive, and in this country hitherto but little cultivated, field of Medical Police. It is published with the hope of extending its usefulness *pro bono publico*. It must be looked upon but as a “Bird’s-Eye View” of a Domain to the extent or details of which the writer has contributed scarce anything. In some introductory remarks it was stated: “The general survey—though hastily and imperfectly performed, without many claims to originality or profundity, and prepared under the pressure of other duties—is intended to furnish *systematic headings* for the various questions that arise; *shelves*, as it were, upon which you might arrange your knowledge in systematic order; and if the attempt prove a failure, I shall find consolation in view of the vastness and intricacy of the inquiry. Exhausting nothing, I intend to touch upon many things. I shall often but indicate the various points for consideration without ‘passing judgment,’ and again, state conclusions without giving the course of reasoning by which they have been arrived at, or the arguments by which they might be sustained. I intend, briefly, to run over the volume as it were before us, *not* in its separate pages, but by its preface and table of contents.”]

Medical Police—*politia medica*—is an institution necessary to the security and perpetuity of society; a necessity resulting, indeed, from the very constitution of society. It is an integral part of State polity.

To obtain a just idea of its nature, objects and limitations, it is requisite to seek primarily clear notions on police in general.

The word *police* is derived from the Greek *πολιτεια*, which ANSON defines: the relation in which a citizen stands to a State; the condition and right of a citizen; and again: the life and business of a statesman; hence, government and administration. It is employed to designate those regulations and institutions of a State, a city, or a country district, which have for their object, to secure the maintenance of its internal peace, good order, safety, comfort, cleanliness and health. It is also applied to the body of men or the "civil force" by which the police regulations are executed and enforced.* In contradistinction to courts of law and justice, it has been said by Schürmeyer,† that the latter are concerned only with illegal human actions, while police is concerned principally with interference with the rights of citizens from force of external circumstances and with enforcement of the laws. A paragraph in the Act of the Legislature of our State, passed April 10, 1860, in reference to the Metropolitan Police, (though it contains some points irrelevant to our purpose,) defines the duties of Police so fully that I quote it entire. "It is hereby made the duty of the Metropolitan police force, at all times of the day and night within the said Metropolitan police district, and the members thereof are accordingly hereby thereunto empowered, to especially preserve the public peace, prevent crime, detect and arrest offenders, suppress riots and insurrections, protect the rights of persons and of property, guard the public health, preserve order at every primary and public election, remove nuisances existing in public streets, roads, places and by-ways, repress and restrain disorderly houses and houses of ill-fame; to arrest all street-beggars and mendicants; to provide a proper police attendance at every fire, in order that thereby the firemen, fire-engines (persons) and property exposed may be suitably assisted and protected; assist, advise and protect emigrants, strangers and travelers in public streets, or at steamboat and ship landings, and railway stations; enforce every law relating to the suppression and punishment of crime, or to the observance of Sunday, or regarding pawn-brokers or mock auctions, or emigrations or elections, or gambling, or intemperance, or lotteries, or lottery policies, or vagrants, or disorderly persons, or the public health, or any ordinance or resolution of com-

* See Blackstone, Bouvier, Webster, Worcester; also, David Booth's *Analytical Dictionary of the English Language*, London, 1836.

† *Handbuch der Medizinischen Policii*, Erlangen, 1856.

mon councils, or town or village authorities within the said district, applicable to police, health, or criminal procedure.”*

It is interesting to know that precisely the same language is used in the Act of the “Congress of the United States,” passed August 6, 1861, “to create a Metropolitan Police District of Columbia, and to establish a police therefor.”†

According to Mohl,‡ Police embraces all the various measures and institutions which, by the exercise of the general powers of the community, aim to prevent or remove those external influences that interfere with lawful actions, enjoyments, and possessions of individuals, which the individual cannot wholly or satisfactorily prevent or remove, without a violation of the rights of others or a disturbance of the peace of the community.

From this we may paraphrase the definition: Police is that exercise of the general supreme power of a community which tends to make inoperative the causes interfering with the rights of the individual, and which he cannot remove without a violation of the rights of others, or of the peace of the community. The science of Police is the systematically arranged knowledge of the various means used for this purpose, and of the principles on which they are instituted and the purpose effected; and indicates what authorities must exist, how they should be organized, and what programme of business they should follow.

In the discharge of its duties, the police occasionally encounters conflicting interests; and as the objection has often been made to the institution of *medical* police, that it would interfere with personal rights, the subject of compulsion may perhaps at this stage of our inquiry profitably engage our passing attention.

The right and duty of the police to employ force when necessary can, in general, not be doubted. The only question that can arise is: Can the benefits of a particular institution be fully realized by one individual, whether or not another avail himself thereof, or are its beneficial results lost to the entire public, unless each individual in the community conform to it? If the former be the case, compulsion is both wrong and inexpedient, for we may admit no one can well be

* Laws of New York, 1860, ch. 259, § 29.

† Statutes at large and Treaties of the United States of America, 37th Congress, 1861, chap. 62, section 5th.

‡ Die Polizeiwissenschaft nach den Grundsätzen des Rechtsstaates, Tübingen, 1844.

compelled to accept benefits designed only for his own good, or to protect only his own person or property. Neither can it be left, however, to the will or caprice of an individual, or even, of many individuals, whether or not the remainder of the community shall enjoy certain valuable and necessary protection or not; and it is a principle, universally admitted by jurists and publicists, I believe, that the will, necessities, or rights of individuals can never stand in the way of the rights, necessities, or will of the community.

The limits of compulsion depend principally upon the resistance; and the means of compulsion upon the nature and importance of the protective institution to be established. The more important and indispensable to the community the object to be attained is, the greater may be the force, amounting, according to circumstances, to loss of privileges, property, liberty, and even life; and all these elementary principles are justly applicable to regulations for the protection of the public health.

As far as police is concerned with the physical condition (and especially the health) of the community, it will be seen on a moment's consideration that, in order to attain its object, it requires the possession of medico-physical *knowledge*; and in view of our previous remarks on police in general, we may now define "Medical Police" to be that science which teaches the application of every branch of medical knowledge—or more widely still, of physical knowledge—to the purposes of police.

Medicine bears to police, as medical police, a somewhat similar relation as it bears to law as medical jurisprudence. And the difference, too, between the latter or legal medicine, *medicina forensis*, and *politia medica* is exactly that between law and police. Both, medical police and medical jurisprudence, are embraced in the term State medicine, *medicina publica* or *medicina politico-forensis*.

The domain of medical police admits of a division into three departments: (1.) Preservation of Public Health; (2.) Removal of Disease; (3.) Administration of Medical Affairs. These three divisions link, at many points, however, closely into each other. The first embraces not only the maintenance, but also the promotion or improvement of the existing sanitary condition of the community, primarily therefore the exclusion of the causes of disease; the second includes the re-establishment of the perturbed state of public health, specially therefore the cure of diseases; while the third embraces the totality of the various laws, regulations, and institutions referring to medicine.

A system of administrative medicine can be established for a com-

munity only after long experience of the proper working of a medical police, and though required by us in order to define the sphere of action of the public health officers, I can at this moment only say, on this head, that the provisions of the Metropolitan Health Bill, emanating from this Association, and now before our Legislature, form, in my estimation, the foundation and outlines of a system which, properly followed up by officials and the medical profession, and extended to medical jurisprudence, gives a reasonable hope that the entire regulation of medical affairs among us will gradually but surely become what it should be.

As to the second division, *i. e.*, the Cure of Diseases, it is plainly the duty of the State, *i. e.* of medical police, to take care that the conditions be not wanting requisite for the restoration of public health. It must ensure, therefore, the existence of the necessary means of cure for the *optional* employment of the individuals, referring both to authorized persons and to drugs, pure and in good order. Besides ensuring this supply for optional use, the community must, in all cases where either from poverty or from other personal and local circumstances the sick individual is incapable of providing himself with the remedial aid he needs, assume to do this also for him. Furthermore is it its duty in epidemics, to publish, as far as expedient and practicable, for the instruction and benefit of the public, any dietetic or other rules of regimen which may be instrumental in alleviating the disease.

The particulars of this division of medical police do not, it is true, fall within the scope of this Association, but, for the sake of completeness, I crave your attention to a brief enumeration:

(1.) To have a competent medical *personnel*, the community requires institutions for its education, and it is the duty of the State to charter, and through the medical police surveil these with solicitous care. It should regulate the admission of students, require a standard of preliminary knowledge, prescribe and facilitate their course of study, and test their competency before licensing to practice. In licensing, specialties, as that of midwives, dentists, oculists, etc., must not be overlooked. The question of the expediency of establishing a tariff of fees, either for private or public services, or both, reclaimable by law, might arise; and certainly that of transgression of license and suppression of quackery must claim attention.

Instruction of nurses or other attendants and assistants, might also become a subject for consideration.

(2.) The care for proper remedial *matériel* involves licensing of

apothecaries, regulation of the sale of poisonous and secret or patent remedies, and inspection of drugs, medicines, and perhaps also, of surgical instruments. The question of establishing here, too, a tariff of prices, with limitations if necessary, might also be considered.

(3.) During the prevalence of an epidemic it would be the duty of medical police to make any extra provision for the treatment of the sick, necessitated by the circumstances.

(4.) Whenever a sick individual is supplied with the aid he requires without its assistance, medical police must not interfere, but it is its duty to procure proper medical and other attendance and provisions when, from any cause whatever, the sick cannot otherwise be provided for.

[For the care of these sick, the following means may be used: (*a.*) General public hospitals; (*b.*) Special hospitals or institutions for the relief of particular maladies, as asylums for the insane, the imbecile, the blind, the deaf and dumb, invalid houses or hospitals for incurables, women's hospitals, children's hospitals, orthopedic institutions, etc; (*c.*) Dispensaries, or places to which the needy sick can go for advice and medicines; and (*d.*) Dispensary out-door departments, with their district physicians, or physicians for the poor, specially employed by the medical police authorities to visit the sick at their homes.

Either of these means may be partly or wholly supplied by private charity, but medical police must, whenever necessary, encourage or assist their establishment, or else establish them itself; and in all cases it must exercise over them a certain supervision.]

(5.) It is the duty of medical police to prevent the interment of persons only apparently dead. (That persons *have* been buried while really alive, there can be no doubt.) Certificates from physicians, special inspection and investigation before granting permission for burial, and the keeping of all bodies for a certain length of time in dead-houses, before interring them, are among the precautions to be considered. (The duties of coroners are closely related to this subject.)

(6.) Provisions for rescue in apparent death, and from accidents, fall also within the sphere of duty of medical police. Wherever deemed necessary, therefore, it should provide both means and instruction as to the popular and immediate aid to be given to the drowned, frozen, strangled and suffocated; to persons fallen from heights, or bitten by suspected dogs, cats, &c., or poisoned in any way, or scalded or burnt; to the asphyxiated, from intoxication, foreign bodies in the air-passages, etc., etc.

We now come to the consideration of what I made the first division, *i. e.*, "The Preservation of Public Health," which forms, *PAR EXCELLENCE*, the domain of medical, or, as it is (in this connection) also called, *Sanitary Police*.

The most important and fertile source of *effective public hygiene* is thorough, minute, and extensive *SCIENTIFIC OBSERVATION* of the *sanitary condition* of the community, and the *causes* influencing it. That such observations, or in other words, *skilled sanitary inspections*, can be made only by persons of a medical education—that private physicians cannot make them extensively and continuedly enough for the purpose, and that they require specially appointed *health officers*, surely is too evident to every intelligent person to require much elucidation.

Let any one but *consider* (even if ever so superficially) what duties such inspection involves. It must embrace the whole manner—the *tout-ensemble*—of a man's life and his relation to all natural and artificial agencies affecting health. It must yield scientific *STATISTICAL*, *CHEMICAL*, *MICROSCOPICAL* and *TECHNOLOGICAL* results for sanitary purposes. It requires a health officer to prepare, and keep corrected, a **SANITARY MAP**, (of the district allotted to his inspection,) showing the grade, width and condition of the streets, the sewers, the soil; the vacant lots and the buildings, and a **SANITARY REGISTER**, showing the number and condition of the inhabitants; not only the deaths, but also the diseases occurring in each locality, with meteorological, barometric and thermometric records, as well as occasional chemical and microscopical analyses of the air and the drinking water of a particular locality, of particular articles of food, etc. I do not mean to say that every *medical man* is fit for such inspection, but that none except a person of a *medical education* IS! A health officer, besides making the ordinary medical studies, must pay *particular attention* to the causation, eradication and prevention of disease. And here, allow me for a moment to enter into an explanation of the term "disease." Although it is convenient in description and discussion to speak of disease as an entity, all educated physicians (if not, indeed, all educated persons,) are well aware that what is so designated, has really *no* personal or ontological character, but is only a condition, and may be defined "a *perversion* either of the functions or of the structure of the body, or of any of its parts." It is, in other words, "a deviation from the normal physiological state or action of the organism under the disturbing influences of morbid causes." In this respect, the positive progress of physical science enables us to stand to-day on altogether a different footing from that of our forefathers. "All pa-

thology is but the physiology of organic perturbations.”* The organism never becomes diseased by itself, nor does it ever alone become a cause of disease. Being the source of all manifestations of life, it is at the same time, also, the means of preservation of these manifestations; only that in its material constitution lies the general possibility of becoming diseased. But the realization of this possibility requires the addition of another factor, that may be called morbidic—or literally, sick-making—Cause!

The morbidic cause must, however, not be regarded a unit. In all cases there are really two different factors, only the co-action of which makes up a cause: producing disease as such—*i. e.*, that calls forth the phenomena giving rise to the term. But in many cases, the organism is forced, by original or acquired constitution, to act as second factor when one factor of a morbidic cause has gone into operation. These factors are called, respectively, remote or predisposary, and direct or exciting cause. (One alone has also been called the cause, and the other the totality of circumstances under which it can act.)

Every man, even the healthiest, as we find him, has natural predispositions to disease; every one will therefore, under favoring circumstances, become sick. Predispositions as well as morbidic causes are very numerous and diverse. They are all of interest and importance to the practicing physician, but medical police is specially concerned with such of them only as transcend the ability of the individual to exclude. As to others than such, its province can only extend, according to circumstances, to calling attention, by appropriate instruction and warning, to the danger and the means of avoiding it; as to the former, however, it has the right and the duty to enforce regulations for their exclusion.

The branch of medicine specially concerned with the *annihilation of the causes of disease* has, during the last few years, found many ardent investigators! A new name: *Nosophthory*—literally, the science of eradicating disease—has been given to it, and it bids fair to attain the rank of honor among the medical sciences!

The SURVEY of this domain of Sanitary Police (*i. e.*, *the exclusion of morbidic causes*,) may, for our present purpose, be divided into three sections, viz.: I. Total Extinction of Causes of Disease. II. Pro-

* Memoranda Medica, or Note-Book of Medical Principles. By Henry Hartsborne, A.M., M.D. Philadelphia, 1860.

tective Measures against Contagious Diseases. III. Protective Measures against Miasmatic Diseases.

I. The total eradication of certain diseases may be considered under the two sub-heads: A. Prevention of hereditary diseases; B. Removal of injurious external influences.

A. Hereditary diseases communicated from progenitors to children, or these going free, to children's children, "even to the third and fourth generation," are generally of such a nature that the healing art can do against them nothing, or but little. Medical police must look to the protection of a future member of the community from such serious complaints, the more as he is entirely innocent of their production, is not able in any way to anticipate, avoid, or get rid of them, and as they may—by burdening society with helpless sufferers from those scourges of the human race that ineffaceably stamp upon their victims deformity and disease—become highly prejudicial to the public weal. Among the means to meet this evil, we must first speak of restriction of such marriages as, in all human probability—for there is here no perfect certainty—will lead to the dire result.

The late Prof. Reese, in a Report on Infant Mortality to the American Medical Association, said:

The *physical health* of both parties in every marriage contract should be regarded by each as equally important with the *moral habits*. And as marriage is a *civil contract*, the fruits of which vastly concern the public welfare, (bearing as they do upon the present and future generation,) it is the duty of the State, in every civilized and Christian country, to *surround* marriage with all the sanctions of *law*, and to *protect* the unborn *fruits* of such alliances from *premature destruction* by *statutory enactments*! These should be such as an enlightened science and philanthropy suggest, and should be encouraged and enforced by the united power of religion and law.

He then goes on to lay down: "No marriage should be permitted between parties until the physical health of both has been subjected to professional scrutiny. And such alliances should be *prohibited by law*, to those of either sex, who are the subjects of those diseases which are known to be hereditary or transmissible to offspring, or such as are fatal to infantile existence. Celibacy should be required *by statute* of all consumptive, scrofulous, scorbutic, gouty, insane, intemperate, and especially *syphilitic* individuals, of either sex; and this, for grave reasons of State, which concern the public weal. Nor

will any course, *short* of such legal prohibition of marriage, adequately correct the evil.”*

Now, this is strong and positive language, just such as the talented Professor was wont to use, but it admits, in my estimation, of grave doubts, whether marriage can be wholly considered a civil contract which the State has under absolute control, and the unconditional right to prohibit. Is it not rather also to be regarded a domestic institution, which the State has only the conditional right to regulate? Prohibition may conflict with the most important, most sacred, private interests and rights! Nevertheless, I too contend that there *are* cases in which all these must yield to the supreme right of society. (But those who labor to establish among us a thorough sanitary police—and this place is as good as any to lay down the general principle which I wish every friend of sanitary reform would appreciate and act on—should not go too far in their proposals and demands, lest, indeed, as Vetter says: “Embracing on the one hand many objects of ordinary police, penetrating on the other, into the recesses of domestic life, choosing the bride for the husband, calling upon the able-bodied for procreation to marry, and forbidding marriage to the weaker, watching the arrangement and the affairs of the household, the bringing up of our children, and the very morsel that we swallow—medical police would become a greater plague and nuisance than any it could remove, and instead of promoting the health, would only interfere with the best interests of the community.”)

Marriages not capable of carrying out their object, and positively injurious to the general good, society must prohibit. Marriages not in this category, yet involving possible injurious consequences to the offspring, may be endeavored to be restrained by suitable instruction and warning, leaving it optional to the parties, according to the circumstances, to enter them or not. From this stand-point the possible prohibition of the following marriages seems indicated: (1.) Marriages before the age of sexual maturity, the precise age to be fixed by law. (2.) Marriages between persons affected with diseases that will *certainly*, or with *very great probability*, be communicated to their offspring, disabling them positively, or that interfere with their mental self-consciousness and responsibility. In this class of diseases insanity and the venereal may be included. (When entirely cured, which must, however, be positively ascertained, there can of course be no reason for prohibiting the marriage any longer.) (3.) Incestuous marriages, in

* Transactions of the American Medical Association, Philadelphia, 1857.

regard to which laws should accurately define the *various degrees of relationship* within which marriage is prohibited.

The next source of hereditary diseases is "Illegitimate Procreation." This opens for discussion the extensive chapters of prostitution, destitution or pauperism, and obscenity or voluntary offences against decency, in which one of the first questions that must be met is: Whether prostitution should by the law be ignored, or sought out and punished, or licensed and regulated. My own conviction is decidedly against both the expediency and the morality of a State's *licensing* such vice, but I concur in the suggestion of my friend, Dr. Griscom, that all prostitutes should be subjected to examination, to determine whether they are affected with venereal disease, and if found diseased, should be sent to the Island to be cured. The whole subject, however, requires grave weighing in all its relations.*

B. In the "*removal of injurious external influences*," Sanitary Police finds its most EXTENSIVE field.

Commencing with the "means for insuring undisturbed *fœtal* existence, laws and ordinances concerning pregnant women, abortion, etc., should be carefully made and stringently carried out. A *dissertation* on "the *sources* of abnormal conditions of the *fœtus*" formed the inaugural fruits of my medical studies; and I would refer here to my Thesis presented for graduation to the Jefferson Medical College of Philadelphia, for a *résumé* of a subject that should be thoroughly investigated from the stand-point of the medical policist.

(2.) "Removal of injurious influences at the *birth* of children" comes next in order. In this connection, I must add, that *Lying-in-Asylums* for expectant mothers, irrespective of character and civil condition, (*i. e.*, whether married or not,) are urgently called for; but the beneficial working of *Regular Foundling Hospitals*, that have lately been so much advocated in our midst, is not so well established, and requires grave consideration.

(3.) The proper "Physical Education," as well as the "Mental," of children, especially of orphans and of poor children, (who have no one else to see to it,) should be carefully *superintended* by medical police.

* A discussion of this subject led to the adoption of a Resolution to "appoint a Committee to present the subject of the limitation of Venereal Diseases for discussion before the Association." Drs. Griscom and Harris were, with the writer, appointed such Committee, whose report will probably be presented to the readers of the MONTHLY in a future number.

(4.) Next we must take up the "subject of sound, wholesome, and unadulterated articles of FOOD and DRINK." For the detection of purity or the particular sophistication, some knowledge of, and manipulative dexterity in, analytical chemistry and microscopy on the part of the Health Warden, is imperatively demanded. Barely to enumerate the articles that he must examine chemically and microscopically, we may name

Cereals and flour, bread, potatoes, vegetables, green and dried fruits, pickles and preserves, meats, sausages, fish, butter, cheese, sugar, confectionery, water for drinking and culinary purposes, (including the important subject of aqueducts,) milk, cream, coffee, tea, cocoa and chocolate, vinegar, soda-water, beer, ale and porter, wine, brandy, gin, and other alcoholic liquors, oils, salt, mustard, pepper, and other condiments, etc.

(5.) Protection against influences prejudicial to health, arising from the use of certain household utensils, colored paper, and copper and leaden vessels, &c. (It is of course understood that *absolute prohibition here*—except perhaps to some extent in public eating-houses, and the like—is out of the question; still, much can be done to prevent their injurious consequences, by a proper Board of Health, and competent Health Wardens.)

(6.) Surveillance of various articles of manufacture, as toys, toilet articles, snuff, etc.

(7.) "Healthy domicils and surveillance of domiciliary arrangements." This is concerned with the condition of the *soil*, and position of the particular lot on which the dwelling is erected, the architecture and the building materials, the arrangements for ventilation, sewerage and drainage, the water-closets and cesspools, the introduction and diffusion of heat, light, &c., &c., with *cleanliness* in the house and out of it as its first law. Even the bare enumeration of all the subdivisions under this head would extend this essay beyond its necessary limits. This care, while *most* urgently demanded for tenement houses, with their disease-producing cellar and closet residences of whole families, and crooked and narrow streets, is applicable in many respects to houses of all classes; for instance, as to injurious wall-papers, too early moving into new houses, etc.

(8.) Clean streets, docks, yards, and public places; removal of ashes, offal, garbage, etc.; removal of all nuisances. Public parks and promenades, public baths, public necessities, hydrants and water-closets.

(9.) The sanitary condition of public buildings, schools, churches,

courts, prisons, (including, of course, the food, clothing and occupation of prisoners,) and other public institutions.

(10.) Removal of injurious effects of various trades, manufactures, arts and occupations. This refers both to the injurious effects on the health of the individuals engaged in any particular business, and to its noxious influence on the health of the community in which it is carried on. Here, too, a wide field is open for public hygiene and sanitary reform. Its cultivation discloses the REMOTE CAUSES of many diseases, and refers them to evils in our civil state, many of which might *easily* be removed. I pass on without specifying the various branches of human industry, and without alluding to military, navy, and merchant ship medical police, which all belong to this division. I must, however, say, that several occupations generally supposed to be injurious, are really, or can be made, entirely harmless with proper hygienic regulations.

(11.) "Prevention of injurious emanations to the community from its burial-grounds." This necessitates regulations for the transportation, and place, and manner of interment of the dead.

(12.) Precautions against the indiscriminate sale of poisons.

(13.) Precautions against dangerous animals, to prevent hydrophobia, &c.

Precautionary measures against suicide, drunkenness, and injuries inflicted by insane persons, &c.

Precautionary measures against injuries from falling down of objects, against falling into the water, or into pits, excavations in the street, against injuries at fires, &c., and prohibition of certain imprudent acts dangerous to public health or life; and

(14.) Precautionary measures against explosions, against dangers in public conveyances, on cars and steamboats, and on ice.

Having thus rapidly run over our first section of the Domain of Sanitary Police, (which embraced the total *eradication* of certain causes of disease,) we may cast a few glances towards the two remaining sections: namely, the institution of Protective Measures against *contagious* and *miasmatic* diseases. We shall look at these very cursorily.

Endemic diseases depend for their production on LOCAL conditions, as geographical position, soil, climate, manner of life, drinking water, food, supply of air and light, &c.

Epidemics depend, generally, on particular conditions and foreign ingredients in the *atmosphere*.

Infectious diseases (including under this name, for the sake of con-

venience, *all communicable* abnormal conditions, therefore both contagious and miasmatic diseases,) depend: (1.) On the communication to the organism of some material cause of a disease, (*materies infectionis*;) and (2.) On the *susceptibility* of the organism—*i. e.*, on its capability of becoming affected thereby so that a disease *svi generis* is the product of the infection: or communication. Without the infection on the one hand, and the susceptibility on the other, there can be no infectious disease. The best means, therefore, for protecting mankind from all *existing infectious diseases* is that which *destroys* the *susceptibility* to become affected thereby, if that can be accomplished *without* injury to health. Now, while there are indications, and reasonable grounds for the hope that the unceasing progress of the physical sciences will eventually—aye, perchance very soon, [for even at this moment but a few links are wanting in the chain of evidence,]—satisfactorily solve this problem, *we already do possess* that means in relation to one of the most *terrible* afflictions of humanity—SMALL-POX—which formerly attacked one-half of the whole *human race*—and almost regularly either *killed* or *for life disfigured* its victims. That the protective means at our command—vaccination—is *imperatively required* by society, seems superfluous to state—and that it is the duty of medical police to use *coercion, if need be*, to *APPLY IT*, is (after my remarks on compulsion in the beginning of this paper) self-evident.

On the question: How *should* and *can* compulsory vaccination be accomplished? I hope to have at a future time the privilege of addressing you.

As to *miasmatic diseases*, it is urged that QUININE, taken during exposure to malarial influences, possesses the power of preventing them.

The endemic, *Cholera infantum*, undoubtedly has, as its causation, the three elements: Intense summer HEAT, the *atmosphere* of large CITIES, and the peculiar susceptibility of *infants*. (Of these, the second is, of course, most under control, by removal to the pure air of the open country.)

Again, the mode of causation of *typhus fever* appears to be placed beyond a doubt! It seems to depend, *in the first place*, upon the one *essential* cause, *Ochlesis*, or CROWD-POISON! Yet *when* shall we hear *no more* of Jail fever, camp fever, ship fever, and by whatever other synonyms and “aliases” typhus ravages humanity! “Wherever the excreta of human beings from their lungs and skins, as well as bowels and kidneys, *accumulate* in an unrenewed atmosphere for a consider-

able period, TYPHUS WILL BE PRODUCED. Then it becomes infectious: both miasmatic and contagious; *i. e.*, not only do certain *places* become tainted with it, so that all persons abiding there, are liable to it, but a *single patient* with typhus, taken to a *new neighborhood*, may generate the disease in other *persons*. The excretory zymotic agent, which ordinarily requires *numerous* bodies to afford it in typhus-breeding quantity, is so *concentrated* and *dynamized* in the body of the patient, sick with the fever, as to have in it the poisoning power of a whole crowd! Thus, in typhus, the morbid poison is originated by the alteration and accumulation of matters *naturally produced in the body*. It is not so with the contagion of small-pox—the *origin* of which is not thus controllable by circumstances, in the absence of its specific cause, nor is it so with the *localized* infection of yellow fever, or the *migratory* poison-cause of cholera.” What a field there is here for a proper medical police—what results can crown its labors—is obvious! A similar remark, almost, applies to endemic TYPHOID fever, although its causation is involved, as yet, in far greater obscurity. That it can be—and frequently is—produced by putrid exhalations of some kind, and in many instances by emanations arising from sewers, there can, however, be no doubt. It was of this disease that Prince Albert of England died!

The fertile and abused subject of *Quarantine* I must pass by. Good in its place, how bad is it out of place!

In the protection of localities, it is believed that the most desirable quarantine is a *dirt quarantine*. “Annihilate or exclude *dirt*, *i. e.*, putrescible animal and vegetable detritus, and no *migratory* or *malignant* morbid poison can sustain its existence even if its cause be imported to the spot!” Thus it is maintained that, by sanitary reform, ALL MALIGNANT EPIDEMICS ARE PREVENTABLE; and it is interesting to know that this has been proved, even as regards plague, once the most destructive of all pestilences, and looked upon as the very *type* of *contagion*! It has now, so to speak, died out in those cities of the East to which it was formerly a *frequent visitant*, if not an endemic. Long ago it was finally excluded from all the parts of *Western Europe*, not by quarantine, but by improved *local* SANITARY ARRANGEMENTS! Its fountain-head, the great Oriental capital, *Cairo*, before the time of Mehemed Ali, many times lost tens of thousands of inhabitants by its visitations. From here it spread, devastating over Egypt and the world! The viceroy named, and his son, Ibrahim Pasha, (though unaware of the stupendously beneficial results of the undertaking,) removed the hills between Boulâq and the mouth of the Nile, and

transformed an immense swamp in the heart of the city, and the *receptacle* of all its filth, into a park, (or olive and fruit-bearing pleasure garden—the “Esbekialh.”) Other local sanitary arrangements were enforced, and now CAIRO (*and with it, all humanity*) IS FREE FROM PLAGUE !*

* * * * *

In conclusion, let me repeat five words, which we can never too often reiterate in the ears of the public and of our Legislature—five words of *Truth!* and *Hope!!* and *Charity!!!*

“*All malignant epidemics are preventable.*” “By attention to the laws of public and domestic hygiene, all malignant epidemics are preventable.” This truth must become the gospel text of the Evangelists of Sanitary Reform! Promulgated through all the avenues to the public mind, every civilized community must appreciate its import, and would soon, by appropriate sanitary measures, realize some of its promises!

“All malignant epidemics are preventable,” AND CAN BE PREVENTED by attention to the laws of hygiene, which it is the object of *this Association* to have systematized and acted upon in the Metropolitan Health District! SHALL *they ever be prevented among us?*

Well did the Sanitary Committee of our Board of Health for 1849, say: “To no other work should the authorities address themselves more earnestly than the establishment of a *thoroughly organized medical police.* * * * The *advantages* of such a measure would be *incalculable.*”

Well did the State Senate Select Committee, in 1859, say: “Preventive Medicine, rising rapidly, to the perfection of a science, is capable of exerting a vast influence over the welfare, physical and moral, of the human race!”

Well did Dr. Griseom, *before this Association*, but a few months ago, quote Mr. Simon's words: “*Preventive Medicine* will effect INFINITELY MORE for mankind than all the DRUGS which have *yet been discovered*, and all the *curative skill* which has *ever* been exerted for the *alleviation* of disease.”

Mr. President, and Members of the New York Sanitary Association: Fellow-Citizens of our beloved Empire City: Let us hope that the happy hour is near at hand when the Metropolis of the New World can partake of the fruits of a Medical Police!

* See the subject of *Etiology*, Hartshorne's Memoranda Medica, Philadelphia, 1860.

